

**REMARKS**

In the Office Action, the Examiner rejects claims 1-6, 9, 10, 12-15, and 17-28 under 35 U.S.C. § 103(a) as being unpatentable over Lowry (U.S. Patent Application Publication No. 2005/0198070) in view of Chi et al. ("Context Query in Information Retrieval," Tools with Artificial Intelligence, 2002, 14<sup>th</sup> IEEE International Conference) and Nguyen (U.S. Patent No. 5,444,823); rejects claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Lowry in view of Chi et al., Nguyen, and Applicants' alleged admitted prior art (APA); and rejects claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Lowry in view of Chi et al., Nguyen, and Mukherjee et al. ("Automatic Discovery of Semantic Structures in HTML Documents," International Conference on Document Analysis and Recognition, 2003). Applicants respectfully traverse these rejections.<sup>1</sup> Claims 1-10, 12-15, and 17-28 remain pending.

Claims 1-6, 9, 10, 12-15, and 17-28 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lowry in view of Chi et al. and Nguyen. Applicants respectfully traverse this rejection.

Independent claim 1 is directed to a method that includes identifying an implicitly defined semantic structure in a document, where a plurality of rules are associated with the implicitly defined semantic structure; determining a location of a first term and a location of a second term within the implicitly defined semantic structure; selecting one of the plurality of rules based on a relationship of the locations of the first and second

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<sup>1</sup> As Applicants' remarks with respect to the Examiner's rejections overcome the rejections, Applicants' silence as to certain assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, assertions as to dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or that such requirements have been met, and Applicants reserve the right to dispute these assertions/requirements in the future.

terms within the implicitly defined semantic structure; determining a distance value between the first and second terms using the selected rule; and outputting the distance value to rank the document for relevancy to a search query that includes the first term and the second term. Lowry, Chi et al., and Nguyen, whether taken alone or in any reasonable combination, do not disclose or suggest this combination of features.

For example, Lowry, Chi et al., and Nguyen do not disclose or suggest selecting one of a plurality of rules based on a relationship of locations of first and second terms within an implicitly defined semantic structure, and determining a distance value between the first and second terms using the selected rule. The Examiner appears to rely on paragraphs 0009-0014 of Lowry, section 4 of Chi et al., and column 1, lines 30-40 of Nguyen as allegedly disclosing these features (Office Action, pg. 3). Applicants respectfully disagree.

At paragraph 0009-0014, Lowry discloses a proximity operator that is to be used in search statements to specify that a record will be retrieved only if the keywords typed as search terms appear within a designated number of words of each other. While this section of Lowry discloses a proximity of words, this section of Lowry does not disclose or suggest selecting one of a plurality of rules based on a relationship of locations of first and second terms within an implicitly defined semantic structure, and determining a distance value between the first and second terms using the selected rule, as recited in claim 1. In fact, this section of Lowry does not mention any rule. Even if a proximity operator could be equated to a rule (a point that Applicants do not concede), Lowry does not disclose selecting the proximity operator based on a relationship of locations of first and second terms within an implicitly defined semantic structure, and determining a

distance value between the first and second terms using the selected rule, as recited in claim 1.

Section 4 of Chi et al. discloses a list of heuristic rules on the detection of an inclusion relation that have been compiled based on the analysis of the design and structure of HTML web pages and the patterns that web authors use to discuss one topic in the context of others. This section of Chi et al. discloses rules to detect an inclusion relation defined by the 'in' operator (i.e. rules that define when a first term is in the "context of" a second term) and does not disclose or suggest determining a distance value between first and second terms using any of the rules. Therefore, this section of Chi et al. does not disclose or suggest selecting one of a plurality of rules based on a relationship of locations of first and second terms within an implicitly defined semantic structure, and determining a distance value between the first and second terms using the selected rule, as recited in claim 1.

At col. 1, lines 30-40, Nguyen discloses:

The most common line of reasoning used by an expert system involves the chaining, either forward, backward or a flexible mix thereof, of IF-THEN rules. However, as knowledge of the domain for a particular problem is almost always incomplete and, has, therefore, a degree of uncertainty in the solution thereof, a rule may have associated therewith, a confidence factor ("CF") or weight.

This section of Nguyen discloses that a chaining of IF-THEN rules, along with an associated confidence factor, is a common line of reasoning. While this section of Nguyen discloses IF-THEN rules, this section of Nguyen does not disclose or suggest determining a distance value between first second terms using a selected IF-THEN rule. Therefore, this section of Nguyen does not disclose or suggest selecting one of a plurality of rules based on a relationship of locations of first and second terms within an implicitly

defined semantic structure, and determining a distance value between the first and second terms using the selected rule, as recited in claim 1.

For at least the foregoing reasons, Applicants submit that claim 1 is patentable over Lowry, Chi et al., and Nguyen, whether taken alone or in any reasonable combination.

Claims 2-6 and 9 depend from claim 1. Therefore, claims 2-6 and 9 are patentable over Lowry, Chi et al., and Nguyen, whether taken alone or in any reasonable combination, for at least the reasons given above with respect to claim 1.

Independent claims 10, 12, 22, and 25 recite features similar to (yet of possibly different scope than) features recited in claim 1. Claims 10, 12, 22, and 25 are, therefore, patentable over Lowry, Chi et al., and Nguyen, whether taken alone, or in any reasonable combination, for at least reasons similar to the reasons given above with respect to claim 1.

Claims 13-15 and 17-21 depend from claim 12 and are, therefore, patentable over Lowry, Chi et al., and Nguyen, whether taken alone, or in any reasonable combination, for at least the reasons given with respect to claim 12.

Claims 23 and 24 depend from claim 22 and are, therefore, patentable over Lowry, Chi et al., and Nguyen, whether taken alone, or in any reasonable combination, for at least the reasons given with respect to claim 22.

Claims 26-28 depend from claim 25 and are, therefore, patentable over Lowry, Chi et al., and Nguyen, whether taken alone, or in any reasonable combination, for at least the reasons given with respect to claim 25.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-6, 9, 10, 12-15, and 17-28 based on Lowry, Chi et al., and Nguyen.

Claim 7 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Lowry, Chi et al., and Nguyen in view of paragraph 5 of Applicants' specification. The rejection is traversed.

Claim 7 depends from claim 1. Without acquiescing that paragraph 5 of Applicants' specification constitutes prior art, Applicants submit that paragraph 5 of Applicants' specification does not cure the deficiencies in Lowry, Chi et al., and Nguyen noted above with respect to claim 1. Claim 7 is, therefore, patentable over Lowry, Chi et al., Nguyen, and paragraph 5 of Applicants' specification, whether taken alone or in any reasonable combination.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 7 based on Lowry, Chi et al., Nguyen, and paragraph 5 of Applicants' specification.

Claim 8 stands rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Lowry, Chi et al., and Nguyen in view of Makherjee et al.. The rejection is traversed.

Claim 8 depends from claim 1. Without acquiescing in the Examiner's rejection with respect to claim 8, Applicants submit that Makherjee et al does not cure the deficiencies in Lowry, Chi et al., and Nguyen noted above with respect to claim 1. Claim 8 is, therefore, patentable over Lowry, Chi et al., Nguyen, and Makherjee et al., whether taken alone or in any reasonable combination.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 8 based on Lowry, Chi et al., Nguyen et al., and Makherjee et al.

### CONCLUSION

In view of the foregoing remarks, Applicants respectfully request the Examiner's reconsideration of the application and the timely allowance of the pending claims.

If the Examiner believes that the application is not now in condition for allowance, Applicants respectfully request that the Examiner contact the undersigned to discuss any outstanding issues.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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